

*Submission from South
Tipperary Beekeepers
Association to the Consultation
on Tipperary County
Development Plan 2022 -2028*

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PART ONE

Introduction

This submission by South Tipperary Beekeepers Association (STBA) is informed by a recognition of the importance of biodiversity protection and enhancement in the context of planning and development in the County. The focus of this paper reflects the importance of the honeybee to the agricultural economy, the necessity to protect the native honeybee *Apis mellifera mellifera* (*A. m. mellifera*) and the interdependence of the natural environment and the apicultural economy. STBA requests these issues are addressed appropriately in the County Development Plan (CDP) 2022 – 2028.

Appendices I and II provide supporting information on agriculture practices and on the importance of the native Irish Honeybee, *A. m. mellifera*, in Ireland.

County Tipperary is one of the most significant agricultural counties in terms of land use in Ireland with a growing reputation for quality, natural food production. Pollinator insects are integral to the agriculture and farming sector with the honeybee being the most important managed pollinator for both the natural environment and for agriculture. This importance is acknowledged by the Department of Agriculture, Food and the Marine (DAFM) within which the Horticulture and Plant Health Division is involved in a number of initiatives supporting beekeeping and honey production. There are 4,462 beekeepers in Ireland, maintaining approximately 27,040 colonies of honeybees nationally and involved in the production of an ancient and much valued food source (FIBKA 2019). However, while the honeybee provides an invaluable pollination service, as a species with a perennial colony it is in turn dependent for its very existence on continued access to sufficient and varied foraging spaces throughout the year. Supporting the requirements of honeybees also caters for the needs of the other species of bees *i.e.*, bumble bees and solitary bees which have more limited flight periods.

STBA was established in 1945 and is concerned with the promotion and advancement of beekeeping, education and development of beekeepers in the art of beekeeping, education of beginners and in representing beekeeping and honey production locally, nationally and internationally. Clonmel, Cluain Meala, is so named because of the historical recognition of ideal local conditions for production of honey. This historical connection between County Tipperary and beekeeping continues today. Currently, the Association has 120 full members and 20 associate members from neighboring beekeeping organisations in North Tipperary, Kilkenny, East Waterford, and Limerick. STBA is one of the most active associations in the country with several members who are recognised both nationally and internationally for their expertise in both beekeeping and honey production. STBA has 5 member who are winners of the Gold Cup for honey production at the London Honey Show, widely regarded as the world cup competition for honey.

Beekeeping and honey production is an important economic activity however it also provides valuable benefits to agriculture in general. These benefits can only be fully realised through high standards of beekeeping; the activities of STBA reflect a commitment to the achievement of excellence in this regard. To this end, various educational and promotional activities take place throughout the year including an annual beginner's beekeeping course, a winter lecture series and outdoor open hive demonstrations in the Association apiary in Bulmer's orchards. In addition, the STBA has been running a study group since 1993 and its success is measured by the high number of members who are certified lecturers and who hold the National Diploma in Science (Apiculture), the highest qualification in beekeeping in this country.

STBA has a long-established profile in South Tipperary which has developed and is sustained by the active participation of the Association in various agricultural and community events throughout the year including the annual Clonmel Horse Show as well as all agricultural shows held throughout the county. The renowned Clonmel Honey Show organised by the Association has been an annual event since 1968 and attracts entries and visitors from across the country. Such events provide a forum for STBA to engage with the public, local businesses, community organisations and local representatives and officials with the aim of promoting a greater understanding of beekeeping and its importance in biodiversity conservation and enhancement.

The County Development Plan

STBA strongly believe that it is essential the Tipperary CDP 2022-2028 explicitly acknowledges the important economic and ecological factors inherent in the protection and enhancement of biodiversity.

There are important ecological synergies between agricultural, apiculture and the natural environment in the County. In protecting and enhancing the natural environment on which the honeybee depends, the Tipperary CDP 2022 – 2028 will be supporting the agriculture economy, landscape preservation and environmental sustainability in the County.

In this regard, it is imperative that active development policies and new land uses in the CDP are balanced against policies designed to minimise damage to the sustainability of pollinator species effected by such developments and minimise damage to habitat areas.

County Development Plans set out the statutory framework for future planning and development in a county in accordance with Section 10 of the Planning and Development Act 2000, as amended. Development planning considerations and related actions are set within the framework of national, regional and related local policies and plans and provide spatial expression to the economic, social and cultural needs of the county. As such the CDB strongly influences new developments in relation to industry, commerce, tourism, education, health and housing. The enhancement of recreation and amenity resources, environmental protection and the valuation afforded to heritage are similarly articulated in the CDP.

It is contended that CDPs have, to date, focussed more on development activity and on development control standards. STBA now wish to see an extension of the “normal” scope of the CDP to include a new and dynamic set of policies and objectives giving effect to both the National Biodiversity Plan and recognition of the status of natural countryside as a prime asset which demands protection and enhancement. Such policies and objectives must be integral to both development approval processes and development implementation actions.

All measures concerned with the protection, management and development of the landscape and its resources must give full and explicit recognition to landscape as *home to nature* and give effect to actions to protect and enhance the biodiversity therein.

Importantly, the first strategic objective of the National Biodiversity Action Plan 2017-2021(NDAP) is to strengthen the mainstreaming process, highlighting the necessity for relevant sectors to take biodiversity considerations into account when developing policies and operational plans. The NDAP references the need to raise awareness within the public sector of the implications of policy and

decisions on biodiversity and states that local action is important in tackling biodiversity loss. Local Authorities are requested to review and update their own Biodiversity and Heritage Action Plans as well as their CDPs and policies, giving due consideration to the protection of biodiversity.

*“The Convention on Biological Diversity’s Cancun Declaration (CBD, 2016) focuses on the need for governments at the national, regional and **local levels** to mainstream the conservation and sustainable use of biodiversity for human well-being. This can be achieved through sectoral and cross-sectoral policies, plans and programs, to establish an effective institutional, legislative and regulatory framework that incorporates an approach that is inclusive.”* (National Biodiversity Action Plan 2017-2021 pg. 26)

In making this submission, STBA strongly support this objective and wish to reiterate the importance of developing specific measures to protect the environment, habitats and biodiversity within County Tipperary. Moreover, STBA seeks that the CDP itself be a strong instrument in the implementation of the National Biodiversity plan. STBA sees the initial local Biodiversity, and more latterly Local Heritage Plans, as nothing more than introductions to the concept of biodiversity. The time has now come for real meaningful policy measures on biodiversity to be included in the CDP.

In line with Objective 1, Action 1.1.4 of National Biodiversity Action Plan 2017-2021, Tipperary County Council should establish a biodiversity resource to provide in- house expertise to support the work of the Council and in particular the work of the Heritage Officer in relation to the natural heritage of County Tipperary. In this regard, the appointment of a Biodiversity Officer would be a strong indication of the commitment of County Tipperary to biodiversity protection and enhancement.

Habitats, Ecosystems and Biodiversity

Biodiversity describes the variety of living things and is fundamental to our daily lives. Biodiversity is responsible for the provision of food, raw materials and medicines. Ireland is a land of varied habitats, including farmland, woodland, cliffs and marshes, sand dunes, caves, heath, bracken, grassland, bog, fens and flushes, turloughs, lakes, ponds, springs and swamps. These natural resources create habitats that support the flora and fauna which inhabit them and over time evolve to create unique local ecosystems with all elements both contributing to and depending on the other. In order for the diversity of species to survive and flourish, the habitats on which they depend must be protected and, indeed, enhanced.

The European Union Habitats Directive provides legal protection for habitats and species of European importance. The overall aim is to maintain or restore the “favourable conservation status” of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated respectively to afford protection to the most valuable and threatened of them.

The loss of biodiversity in agricultural landscapes has been dramatic over the past few decades with negative trends persisting. The Environmental Protection Agency has noted that 85% of EU protected habitats have unfavorable status with 15% of protected species areas in decline (Environmental Protection Agency, 2020). It is further noted that agricultural practices are a key pressure, and habitat changes point towards a deteriorating trend in overall biodiversity. (see Appendix I)

The EU Habitats Directive should continue to be fully incorporated into the new CDP. It is essential that County Tipperary apply and monitor these protections with renewed vigour such that the deteriorating trend is reversed. This renewed focus would be a core element of the work of a dedicated Biodiversity Officer.

However, there are limits to the conservation of habitats in applying the EU Habitats Directive regulations. This legislation applies only to those areas identified and designated. The conservation of the wider countryside is of equal importance with woodlands, hedgerows, rivers, lakes, ponds etc all contributing to the rich diversity of species and habitats in the county. Hedgerows are one of the most widespread natural habitats in the countryside and are critical to the existence of numerous plants and animals. They are particularly important within areas of intensive farming, and for the survival of widespread yet declining species which are dependent on woodland edge, scrub or rough grassland habitats. Such areas contribute to a network of wildlife corridors and habitats which allow wildlife to flourish as well as providing forage areas for managed pollinators such as the honeybee.

It follows therefore, that the CDP should contain objectives to ensure that where greenfield lands are being developed that it is obligatory that a habitat and biodiversity assessment is made of the losses that will occur. Side by side with that a further objective should identify and provide for resources to enable compensatory and mitigation measures to be implemented. This could be achieved by using a part of development levy income for the purposes of restoration of biodiversity and hedgerow loss in such areas. An innovative approach to accommodating such a policy prioritisation of habitat/biodiversity protection would be to provide a dedicated back to nature or re-wilding space within zoned areas.

The importance of rural landscape resources for the protection and enhancement of biodiversity cannot be overstated, however there is also significant and important opportunities for biodiversity measures to be implemented in urban spaces, amenity areas, riverbanks, ponds and along transport routes. Much of this land may be under the direct control and management of the County Council. In implementing specific measures and, importantly, communicating and publicising these measures and the associated actions to local communities and key stakeholders, important benefits will be realised:

- habitats will be protected and improved directly through Council actions.
- the publicity associated with these actions will animate and inspire community groups, schools, sports facilities, local enterprises etc to engage in / replicate biodiversity activities in their own areas.

- Tipperary County Council should identify, conserve and enhance wildlife habitats and species of local importance not otherwise protected by legislation. This includes field boundaries (hedges and ditches), woodlands, rivers, wetlands and grassland areas.
- Land use and spatial development in the County should be subject to a mitigation hierarchy process whereby developments which impacts on biodiversity, landscape or the environment are first, avoided where possible; second, minimised; and third, corrected through restoration or repair.
- The County Council should identify and provide for resources to enable compensatory and mitigation measures to be implemented e.g. ringfence part of development levy income for the purposes of restoration of biodiversity and hedgerow loss in such areas.
- The County Council must identify and protect existing and potential habitats and spaces in urban areas, towns and villages in the course of its spatial planning and development obligations.
- Tipperary County Council should identify and ring fence resources for upskilling the local authority workforce and community organisations in recognising where habitat damage and biodiversity loss exists and

Species Decline

Biodiversity refers also to species diversity both within a species and between species. Many species are in decline and in some cases their future is endangered. In many cases irreversible losses have already occurred. Many species have become extinct, and it is considered that impending extinction rates are many times greater than those of the past. The extinction of one species results in the irreversible loss of a unique suite of genetic adaptations that have been acquired typically over significant timescales from hundreds to thousands of years. For example, the All Ireland Pollinator Plan 2015-2020 highlighted that more than half of Ireland's bees have undergone substantial decline with 4 out of 21 bumble bees endangered and 2 categorised as vulnerable.

Non Native Species

Biodiversity can be threatened by the introduction of non-native species which can disrupt entire ecosystems and impact populations of native plants or animals. These invaders can adversely affect native species by eating them, infecting them, competing with them, or mating with them. The native honeybee, *A. m. mellifera*, is under such threat. The native Irish honeybee is a subspecies that evolved in north-western Europe and research supported by the DAFM and Native Irish Honey Bee Society (NIHBS) confirmed unambiguously in 2018 that it is genetically distinctive (see Appendix II). This distinctiveness contributes the traits that means it is uniquely adapted to Irish climate and weather patterns. However, *A. m. mellifera* is vulnerable to external threats principally hybridization with bees from a different genetic stock and to diseases that might be imported with bees from abroad. Where introduced sub-species, such as *Apis mellifera ligustica*, *Apis mellifera carnica*, and / or hybrid commercialised strains such as Buckfast bees are present there is potential for genetic changes which undermine the adaptations of the local population to its environment.

A key tool in protecting and augmenting populations of threatened species is the designation of conservation areas in which the organism of interest is accorded special protection by improving supports such as habitats and reducing threats such as competitors or diseases. The use of voluntary conservation areas is a key element of the strategy advocated by NIHBS in support of the native Irish honeybee, *A. m. mellifera*. While fully recognising that designating Tipperary as a conservation area for the native bee can only be achieved on a *voluntary* basis without changes to legislation (nationally and at a European level), the explicit support and recognition by the Council in Tipperary as an element of its biodiversity measures would add support to the efforts of beekeepers in the County. At the very least recognition of the conservation objectives for *A. m. mellifera* in the County is a strong objective of this submission. The support of the County Council in this regard would be consistent with Action 4.4 of the new All Ireland Pollinator Plan, 2021 - 2025 which relates to conservation of *A. m. mellifera* and states "*Ireland has a duty to conserve this genetic resource*" (AIPP 2021-2025 pg. 48).

Tipperary County Council should explicitly support the protection and survival of the native Irish honeybee, *Apis mellifera mellifera* by recognising the conservation objectives of STBA in promoting voluntary conservation areas.

Agriculture and Food Production

As an agricultural county, Tipperary is a large producer of foods. Going forward it is important that the promotion of quality food production is central in the economy of the County. The County already has strategic advantages in production of quality food including its geographical location

with easy access to ports, the quality of the land, a highly developed agricultural sector, and an experienced and trained farming workforce. Ireland also has climate advantageous over many European countries and continues to retain good air, water and soil quality.

It is important that policies and objectives within the CDP reflect the importance of quality food production to the economy and the image of the County. The protection and enhancement of the natural environment and biodiversity on which food production relies for its quality must be central to all development in the County. Tipperary should therefore develop additional focus on specific policies within the life of this CDP to support and enhance quality food production.

Beekeeping is an integral part of an agriculture sector producing high quality food but with scope for further growth and as such can benefit from supportive CDP policies. It should be noted that:

- The value of the honey produced in Ireland in 2019 was estimated by the DAFM to be €4,296,000, based on production of 205 tonnes.
- In 2016, Ireland imported 4,086 tonnes of honey, demonstrating a significant market. Wholesale honey price is estimated at €10,460/tonne or greater, depending on honey type. Except for a very small number of larger honey producers most of the estimated 3,000 registered beekeepers in Ireland operate on small scale.
- Teagasc has calculated a 3-year average yield of 20kg per year per hive. Honey yields vary from year to year, depending on weather, genetics of the individual colony and forage in the locality.

The CDP should give special regard to advantages, opportunities and strengths in County Tipperary for quality food production as an especially strong attribute of the County. This recognition should cover the mainstream large scale food production but also the niche market and smaller scale farm gate producers which includes most honey producers in the County

Climate Change

It is acknowledged that whilst intensive agricultural production systems have contributed to a significant decline in habitat and biodiversity, these matters are not necessarily within the remit of local authorities. However, what happens on farming land can potentially have a significant impact off farm. Environmental issues such as degraded soils, declining air and water quality, increasing water issues including flooding, and biodiversity do present problems which the local authority has to address. (see Appendix I)

This will require active engagement with landowners which goes beyond regulation of hedgerow cutting and scrub land burning activities. It suggests a close partnership with key stakeholders and consideration of inducements to manage natural resources in a way which offers benefits to the wider community and the natural world.

The role of trees, woodlands and hedgerows as habitat and forage areas for pollinators is of particular importance to STBA. However, the role of these resources in providing other ecosystem services should be acknowledged. Hedgerows, trees and woodland soils lock up vast quantities of carbon. Ireland's greenhouse gas emissions profile – with over one-third of emissions coming from agriculture and a high dependency on fossil fuels – is particularly challenging. The commitment of Tipperary County Council in relation to the development of a low carbon society and action on climate change is evident in preparatory documentation for the County Development Plan 2022 – 2028. It is proposed that a low carbon society can be achieved through a range of measures, including

reducing carbon emissions, decreasing reliance on fossil fuels through development of renewable energy resources and increasing energy efficiency.

Combining mitigation measures alongside reducing carbon emissions suggests greater positive climate change impact. Hedgerows and forestry and diversity of plant species (i.e. monoculture in agriculture and in forestry must be recognised as detrimental to climate change objectives) have a significant role to play in this regard. However, hedgerows need to be managed in such a way as to maximise their carbon sequestration capacity. It is proposed that the ‘quality’ of the hedgerows is therefore important on a number of levels and that greater attention is afforded to this aspect of landscape management.

Tipperary County Council could facilitate the promotion and support for improved practices in rural areas by increasing awareness and information sharing between farmers. Promotion of the beneficial initiatives being adopted by individuals and farmer groups would also result in more sustainable farming systems, associated ecosystems services and improved biodiversity for the benefit of residents in and visitors to the county. It is the view of STBA that County Development Planning policies need to come up to date and relate specifically to these issues.

Landscape: Heritage and Habitat

This submission reflects a specific interest in the preservation and enhancement of the natural resources of the County in the interest of protecting ecosystems and biodiversity. However, it would be remiss not to acknowledge the cultural services and natural heritage of the County which nature provides. A key element of this heritage is the landscape and within that, the hedgerows which constitute a defining feature of the rural landscape in particular. Hedgerows create the characteristic structure and patterns of the areas we inhabit and in turn provide a sense of place, the familiar vistas which represent ‘home’ to the people of Tipperary.

The Council should consider designation of Landscape Conservation Areas to protect specific and important landscapes.

Landscape Management

While the Council should fully assess the implications for wildlife, significant trees and hedgerows and waterways located on lands being considered for development, this alone will not reverse the impact of decades of poor management and decline of such resources. It is imperative that such resources are enhanced and increased across the County and not only on land which the local authority has direct control or powers associated with development.

Hedges are exceptionally important as habitats not only for birds and other wildlife but for the flowers, shrubs and trees which provide a significant source of nectar and pollen for all pollinators, including honeybees. The following species are particularly dependent on hedges for food and / or shelter:

- 55 species of birds (35 of which depend on hedges for nesting)
- Mammals – hedgehogs, shrews, pine marten and bats
- 99 species of bees – (77 solitary bees, 21 bumble bees, 1 honeybee)
- 1400+ species of moths
- 35 species of butterflies

(Keena, 2020)

Well-managed hedgerows are a vital resource providing food and a safe place to live for pollinator populations. One third of the 99 bee species are threatened with extinction from the island of Ireland. Even though honeybees are now generally found in apiaries, they, along with all pollinators continue to be dependent on an abundance and diversity of flowering plants and trees on which to forage. To have a healthy balanced diet, they need to be able to feed on pollen and nectar from a range of different flowers from spring to autumn. The wider pollinator family also need plenty of safe nesting habitats - long grass, bare earth, crevices in dry stone walls or wood.

In addition to the role hedgerows play in pollinator survival, it is important to ensure a wide variety of native plants (trees, shrubs, wildflowers) are available across the whole county landscape including riverbanks, woodland, urban and amenity areas and commuter routes. A specific example of the broader benefits of a reconsidered approach to such areas can be demonstrated by a move away from grass lawns in amenities areas. These no doubt have their place, but it must be recognised that for such areas to look well a high level of maintenance, inputs of machinery and manpower is required. Wild meadow type amenity areas are now recognised as having more beneficial value for pollinators and once established have lower maintenance input requirements resulting in a ‘win win’ outcome.

The Council should develop specific measures to:

- ensure all planning approval includes planting schemes with native plant species which contributes to the biodiversity and strengthens networks of wildlife habitats.
- continue the focus on protecting pollinators commenced under the All Ireland Pollinator Plan 2015 – 2020 and continuing with the new All Ireland Pollinator Plan 2021-2025.
- increase planting of native trees, shrubs and wildflowers in all council managed land and amenity areas.
- work in partnership with stakeholders to reward good practice in hedgerow management and consider sponsoring awards / rewards to ‘hedgerow heroes’ who demonstrate outstanding good practice with a focus on *quality* hedgerows.
- renew emphasis on education and direct advise to better support community groups in towns and villages to undertake pollinator friendly planting and biodiversity sensitive enhancement activities.
- eliminate the use of herbicides, pesticides and insecticides, in particular neonicotinoids, which are detrimental to the well-being of pollinators and honeybees on all council managed land and promote the avoidance of same in as far as possible on privately owned land within the County.
- support training measures to upskill contractors involved in hedge cutting activities such that they become advisors / advocates for the appropriate management of hedgerows on private land.

Appendix I

Agriculture: Sustainable Food Production Systems

The Common Agricultural Policy (CAP) has provided the main agricultural policy framework for EU member states for decades. Initially the policy was focused on increasing agricultural output up to the early 1990s when market price and production led support was gradually replaced by supports not linked with farm output but focused on land management practice and improving environmental indicators. The transition has been extremely slow and some would argue ineffective. Today, the CAP is focused on three aspects; ensuring food security, nutrition and public health; having a positive environmental impact and reversing biodiversity decline; and, mitigating climate change and adapting to its impacts. The overarching objective is to support sustainable food production systems.

The EU Green Deal and the Farm to Fork Strategy has set out ambitious targets for agriculture and food production over the coming decade. These targets concern the reduction in artificial and chemical inputs in production systems with concurrent improvements in farm management practices as follows:-

- 50% reduction in pesticide usage by 2030
- 50% reduction in sales of antibiotics for livestock/aquaculture
- 20% reduction in chemical fertiliser use by 2030
- 25% of total farmland in EU under organic production
- 75% of EU soil to have 'healthy' status by 2030

While the thrust of agricultural development and support policy in Ireland has largely focused on commodity production and increased output, the sector is under-developed from an ecosystem services point of view. The loss of biodiversity in agricultural landscapes has been dramatic over the past few decades with negative trends persisting. The EPA has noted that 85% of EU protected habitats have unfavorable status with 15% of protected species areas in decline. It is further noted that agricultural practices are a key pressure, and habitat changes point towards a deteriorating trending in overall biodiversity. Farm enterprise models have been based on intensive production systems using monoculture crops and forages. Such systems may lessen the potential ecosystem services and, in some enterprise models, have damaged landscape biodiversity. Using innovative land management practices that are more resilient to changing climate patterns are desirable for sustainable and profitable production.

Growing mixed species swards, containing grasses, legumes, and herbs with varying rooting depths have proven very effective at farm level in maintaining productivity while reducing chemical input requirements. Conventional monoculture ryegrass swards, used for intensive dairy and drystock systems, have a high nitrogen demand with the shorter rooting depth making them more vulnerable during very wet and/or dry conditions. Not alone are deeper rooting plants, such as clovers, plantains and chicory, good for livestock nutrition, their deep rooting makes such pasture more resilient to inclement weather and drought. Associated flowers in mixed species increases biodiversity and improves habitat for pollinating insects. One of the major impediments to maintaining biodiversity

and habitat for pollinators is the loss of hedgerows and clover-rich swards due to dairy expansion and the monoculture grass-based model being promoted. The alternative biodiverse system offers farmers similar output and productivity levels with reduced fossil fuel input costs leading to more sustainable profit. In addition, there is better retention of water in the soil profile with off-farm benefits including less water demand, less surface water run-off, and spate flooding.

Intensive cultivation systems, ploughing and power-harrowing, often used to establish crops cause a flux in CO₂ emissions, and result in reduced organic matter levels and inherent fertility in agricultural soils. Natural soil structure is damaged and soil is exposed leading to further degradation from weathering, soil surface capping, and poor rain infiltration. The resultant surface water run off leads to nutrient and sediment loss to watercourses. The sediments may also contain nitrate and phosphates residues which lead to declining water quality. They can also settle on gravel beds in streams and rivers so essential for salmon spawning and associated freshwater pearl mussel life cycles. Importantly, the surface water runoff leads to increased water volumes hitting main river channels over shorter periods resulting in flash flooding—on public roads (with road surface damage), in streams and rivers which burst their banks more frequently leading to flood events in villages and towns further downstream. The cost to the local authorities can be prohibitive and can be addressed at source, with encouragement and support for alternative land management techniques. Conservation agriculture systems use minimal soil disturbance for crop establishment leaving soils covered with organic material, use diverse rotations and crop associations, and include the use of mixed species cover crops over fallow and winter periods. Different species flower in late autumn and early spring and provide extra nectar and habitat for pollinators at times when the agricultural landscape is otherwise bare. Increasing soil organic matter levels benefits the farmer with better water retention and reduced crop impacts from dry periods and droughts. The environmental profile of production improves significantly with up to 70% reduced agri-diesel consumption and associated emissions, reduced chemical inputs including insecticide use, and the use of cover crops allows for nutrient cycling allowing for reduction in chemical fertiliser use over time. Farm management benefits with less costs and time and labour requirements also. Some Tipperary crop producers have successfully used these practices and demonstrated their appropriateness to local soil and climate conditions for more widespread adoption.

The national commercial forestry model, including technical and financial support for afforestation, is largely focused on softwood forest plantations that do not harbour the quantity or quality of species needed to address the national biodiversity crisis. On maturity these plantations are clear-felled potentially leading to other environmental issues (water run-off, invasive species etc.). Recent issues relating to licencing of forestry works has caused many farmers to abandon any plans for tree planting. Agroforestry, on the other hand, is a far more flexible approach and enables the landowner to plant trees and establish or maintain hedgerows within the landscape in a manner that is integrated with existing farm enterprises. There has been great success with partially funded initiatives in agri-environment schemes to date e.g., planting of traditional orchards, native tree copses, and hedgerows in fields, hedgerow improvement and maintenance with coppicing and laying, less frequent and timely cutting etc. Many landowners have participated in CAP supported schemes and piloted shrub and tree planting of riparian zones prone to erosion within river catchment areas where significant surface run-off occurs. These forms of tree planting, although not overtly commercial, is both productive and beneficial. Outputs include flower, fruit and nut production, fibre and fuel, livestock

protection with wind breaks, pollination services, surface water runoff management, and water regulation in a biodiverse landscape.

While agricultural production models are not necessarily within the remit of local authorities the fact remains that what happens on land parcels can potentially have a significant impact off farm. And when environmental issues arise such as degraded soils, declining air and water quality, increasing water issues including flooding, and biodiversity loss it is the local authority that has to address associated problems or issues. Many of the long-term solutions needed are rooted in changing farm management practice while not sacrificing productivity or profitability for the farmer. Many farmers within the county have successfully changed their farm practices and are deriving many benefits with more productive soils, better animal productivity and welfare, and reduced input costs yielding more resilient and sustainable production systems. Excellent work has already been carried out with Council engagement with European Innovation Partnership projects (EIPs) in the county and catchment assessment work with the Local Authorities, Water and Communities Office (LAWPRO) and more proactive engagement work like this is needed.

Geraghty, J (2021) Agriculture: Sustainable Food Production Systems, *Unpublished Paper*

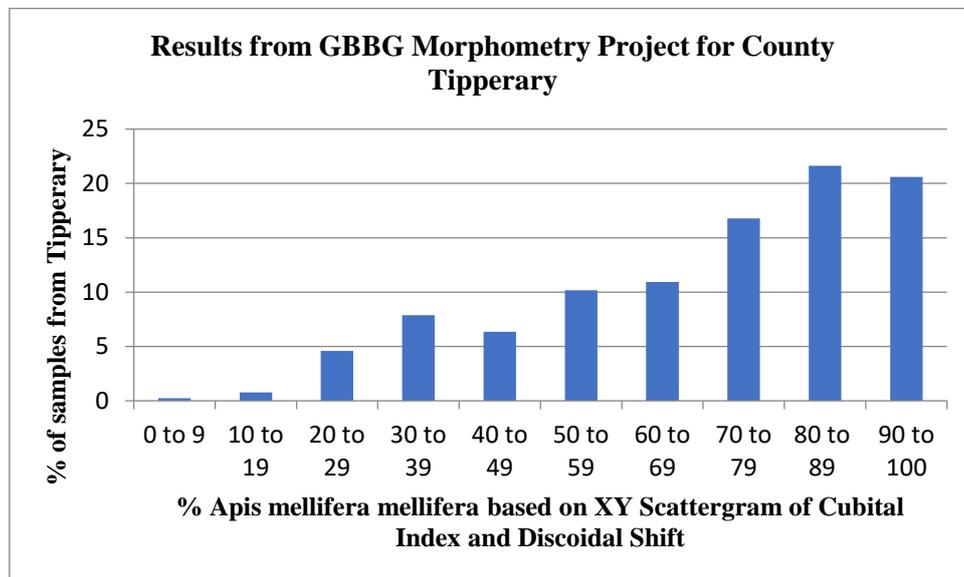
Appendix II

The significance of the Native Black Bee *A. m. mellifera* in the Irish honeybee population

1. An examination of the distribution of native Irish honeybees

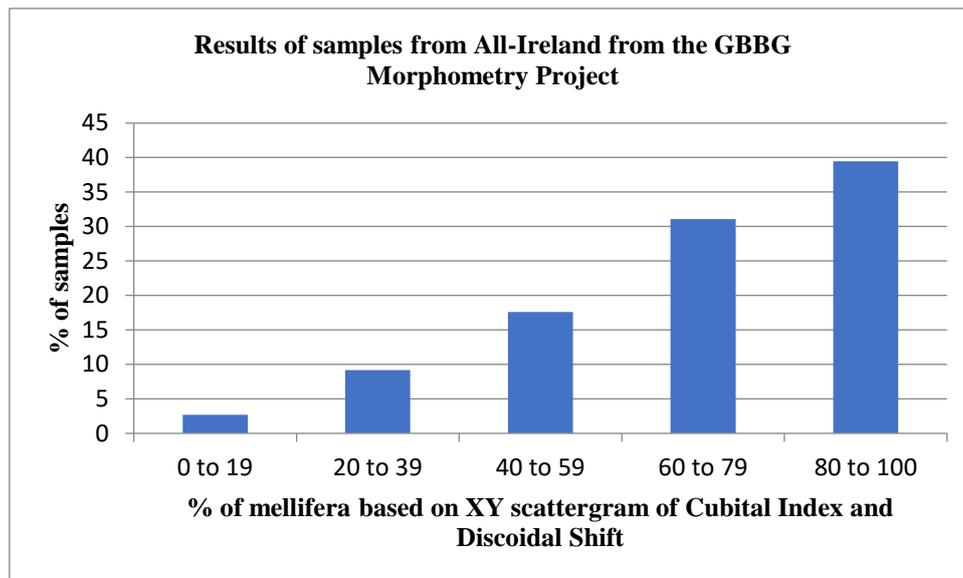
An examination of the distribution of The Native Black Bee in Ireland, by Emma Williams (2013) provides results from examination of a total of 1040 honeybee samples, each of 35 bees, taken from individual hives from 30 counties. The study puts into context just how important the Native Irish Honey Bee is across the island of Ireland. The result shows the extent to which the samples contained *A. m. mellifera* for each county, province, and overall on the island of Ireland.

- 46% of samples having 75% *A. m. mellifera*
- overall, 80% of samples showed greater than 50% *A. m. mellifera*



A total of 393 samples were analysed from County Tipperary as part of the GBBG All-Ireland Morphometry project. The graph above shows that:

- In excess of forty percent of samples from County Tipperary had a result greater than 80 percent *A. m. mellifera*;
- In excess of eighty percent of samples from County Tipperary had a result greater than fifty percent *A. m. mellifera* ; and
- Less than 6 percent of samples from County Tipperary had a result less than thirty percent *A. m. mellifera* .



The graph above illustrates the results of the samples (n = 1047) obtained and analysed as part of the GBBG Morphometry project. It shows that:

- In excess of seventy percent of samples obtained a result greater than sixty percent *Apis mellifera mellifera*;
- Less than twelve percent of samples had a result less than forty percent *Apis mellifera mellifera*; and
- Almost forty percent of samples had a result greater than eighty percent *Apis mellifera mellifera*.

2. A significant pure population of the dark European honeybee (*Apis mellifera mellifera*) remains in Ireland

A recent study undertaken by Hassett *et al* (2018) and published in the *Journal of Apiculture* demonstrated the significant and widespread presence of a pure population of *A. m. mellifera* in Ireland. Molecular data was generated from 412 bees sampled from 24 counties across the island. Mitochondrial data identified 34 different haplotypes, with 63% of bees having sequences identical to three European haplotypes but all other haplotypes being novel. Population structure analysis using microsatellite markers indicates that the Irish population is genetically diverse and that 97.8% of sampled bees were determined to be pure *A. m. mellifera*. Results from cluster analysis using a Bayesian model approach, and the presence of novel alleles, shows evidence of distinctiveness within the Irish population.

The Study concluded:

*“The presence of such a widespread and pure population of *A. m. mellifera* in Ireland is now an incredibly important resource for the protection of this subspecies in Europe. Given the devastating impacts of varroa from introduced bees on this population, particularly on wild bees, efforts should be increased to prevent any impact on this subspecies from introductions of pests and diseases due to the continued imports of non-Irish bees.”*

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PART TWO

Written Statement Location Reference		Proposed Changes		
Page	Para graph	Amendment / Addition (Red Text)	Comment	STBA Interest
15	1	The development objectives in the Plan are consistent, as far as practicable, with the conservation, enhancement and protection of the environment	In order to address level of environmental damage in the past, the existing environment requires positive action to improve rather than just conserving and protecting the environment. This is in line with SO 1 (Pg. 30) in this document and with RSES vision reference in 1.3.3 (pg. 11)	Particular interest in enhancing areas necessary for encouraging and supporting biodiversity including agricultural, state and commercially owned rural and urban spaces. STBA urge the County Council to work actively in partnership with farming organisation to foster good practice and the employment of a dedicated biodiversity officer(s). The CDP policies should be explicit in this regard and should display intent to enhance as well as protect the environment
17		Vision: A vibrant place where people can live ,visit and work in a competitive and resilient economy, a sustainable and continually enhanced environment and an inclusive and active community	It is not enough to just sustain the environment	Biodiversity loss over the past must be continually re-established over the lifetime of this CDP
19		Strengths of the County Add the following <ul style="list-style-type: none"> • the quality of the land as a resource is important • the quality of the farming community and their experience is an asset 	As a quality food producing area Tipperary needs to recognise all its key strengths	STBA members recognise the importance of the quality of the land and the quality and expertise of the farming community in the production quality honey

28	2.5.6	Tipperary's natural environment comprises natural areas including mountains , water bodies, peat lands and valleys and the flora and fauna that thrive in these areas	The environment is not just a place, it is a living place	Honey bees in particular depend not just on the physical place but on the living whole of the environment to thrive
31	SO 6	It is a Strategic Objective of the CDP that sustainability and resilience will be core strategies for development of the rural economy and the CDP will seek to integrate sustainable management of land and natural resources in all development	The CDP should lead in this not just play a support role (also reference para 3.3.2)	
31	SO 7	To protect, enhance and connect areas of natural heritage, relevant intangible cultural heritage , blue and green infrastructure and waterbodies, for quality of life, biodiversity, species and habitats, while having regard to climate change adaptation and flood risk management measures.	Beekeeping as a key practice of Ireland's Living Cultural Heritage with particular relevance for Tipperary's biodiversity, species protection and food production economy.	STBA has particular interest in the conservation of the Native Black Bee. The practice of beekeeping in this area are significant for aspects of the CDP strategic objective concerned with biodiversity and species. It is essential that the CDP explicitly recognises this and in so doing, demonstrate a commitment that can be followed through in future actions of the Heritage Officer and Biodiversity Officer
33	2.5.7	The NPF recognises the importance of our built and cultural heritage in our quality of life and our identity. Built and cultural heritage includes sites and monuments, landscapes, buildings and folklore, traditional practices and sporting traditions etc.	The development and extension of Ireland's National Inventory of Intangible Cultural Heritage is an integral part of the work of the Department under the UNESCO 2003 Convention for the Safeguarding of the Intangible Cultural Heritage which requires States to recognise, protect and promote the living cultural heritage of their countries.	August 2021 Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media, Catherine Martin TD, has extended the National Inventory of Intangible Cultural Heritage, giving State recognition to Beekeeping as a key practice of Ireland's Living Cultural Heritage.
40	3.4.8	The Council, as a member of the 'All Island Pollinator Plan', will (remove seek to) actively promote and provide support to local communities and schools in the development of community-led sustainable energy initiatives, and biodiversity focused amenity plans and actions.	A more proactive commitment is required than the existing statement suggests. The Council must be a leader to ensure active participation among a significant majority of communities not just support those already engaged. Undertaking this work should be a core element of the work of dedicated Biodiversity Officer(s)	Biodiversity and active enhancement and protection of habitats, food sources and species are specific areas of interest and concern for STBA and all those committed to the implementation of The All Ireland Pollinator Plan. STBA urges an explicit commitment to a dedicated Biodiversity Officer (s) in the CDP

44	Add New Policy to 3-7	Support the development of local food production and distribution within the region	This follows from climate action	Beekeepers strongly support and promote the art of beekeeping and the production of honey locally
75	6.1	ADD The diagram fig 6.1 should include a segment entitled local quality food production	Food is a basic requirement for life. The quality of life is dependent on the quality of food available (reference para 6.2.4) this diagram should include this	In Tipperary the production of quality honey is an age old tradition that enhanced the quality of life in Tipperary
79	6.4.2	The Council will seek to actively promote and provide support to local communities in the development of community-led sustainable energy initiatives, and biodiversity focused amenity plans and actions and interested groups to assist in the development of community gardens/allotments and biodiversity focused initiatives in towns and villages	A more proactive commitment is required than the existing statement suggests. The Council must be a leader to ensure active participation among a significant majority of communities not just support those already engaged. Undertaking this work should be a core element of the work of dedicated Biodiversity Officer(s)	Biodiversity and active enhancement and protection of habitats, food sources and species are specific areas of interest and concern for STBA and all those committed to the implementation of The All Ireland Pollinator Plan. STBA urges an explicit commitment to a dedicated Biodiversity Officer (s) in the CDP
83	6 H	Provide leadership, support to, and to consult with local communities in the development of community-led and biodiversity focused amenity plans and actions.	A more proactive commitment is required than the existing statement suggests. The Council must be a leader to ensure active participation among a significant majority of communities not just support those already engaged. Undertaking this work should be a core element of the work of dedicated Biodiversity Officer(s)	
96	8.1	Tipperary's small and medium size enterprises are a key in the county's indigenous economy, along with food production and a reputation for artisan foods. The Tipperary Food Producers Network is one of the strongest artisan food networks in the country, and an excellent example of enterprise clustering and smart specialisation. Of note, is Tipperary's long association with beekeeping and honey production with the	Food deserves a separate para otherwise it is easy to overlook the importance of the sector Tipperary enjoys a central location, rich agriculture land, experienced farming sector, strong in food production and artisan foods, the county is ideally placed for development, clustering specialisation and expansion of rural food enterprise.	STBA is a food production association - honey production. Support from the Council in terms support for this enterprise includes a focus on biodiversity, appropriate enhancement and protection of forage areas including quality hedgerow management and urban planting schemes. .

		<p>name Clonmel, Cluain Meala, demonstrating the historical recognition of ideal local conditions for production of honey.</p> <p>Tipperary is famous as a specialist region for the equine sector, being home to many well-known breeding and training yards.</p>	<p>Honey production in the county is a small-scale agricultural enterprise, however it has potential to become a more significant actor. The value of the honey produced in Ireland in 2019 was estimated by the DAFM to be €4,296,000, based on production of 205 tonnes.</p> <p>In 2016, Ireland imported 4,086 tonnes of honey, demonstrating a significant market. Wholesale honey price is estimated at €10,460/tonne</p> <p>Tipperary is famous as a special region for the equine sector, being home to many breeding and training yards of international and national renown. It needs to be acknowledged in separate paragraph.</p>	<p>Importantly, explicit recognition in the CDP by the County Council of Tipperary as a Voluntary Conservation Area for the native Irish blackbee is sought.</p>
103	Para 8.4.1	<p>Additional policy measures required Para 8.4.1 is mainly focused on water quality protection and positive to energy development projects.</p> <ul style="list-style-type: none"> • A policy that protects the hedgerows and native species is required. • A policy that requires hedgerows where disturbed to be replaced elsewhere. • A policy, that requires developments to recognise the linkage between quality food production and quality management of land resources, is required 	<p>Current focus is too narrow and does not reflect statements elsewhere to protecting environmental resources essential for biodiversity and the link with this and quality food production.</p> <p>Some indicative measure of how this will be achieved is missing here</p>	<p>STBA believes that in a modern uptodate development plan actions that will achieve the shift in direction are essential.</p>
105	8.4.4	<p>It is recognised that the viability of start-up enterprises is often dependent on the use of a home base. On a case-by case basis, the Council will make every effort to (remove seek to) facilitate small-scale enterprise developments outside of settlements, to</p>	<p>Agriculture and horticulture are traditionally a rural enterprise. Post Covid working from home is a new phenomenon for other sectors and is being widely encouraged and facilitated. Agriculture and horticulture enterprises should be facilitated where they are carried out.</p>	<p>Beekeeping by its nature is a rural small enterprise in quality food production. We feel other similar food and local skills based enterprises should be encouraged in rural areas.</p>

		facilitate a start-up entrepreneur in or adjacent to their own home.	The development and trading of local expertise and skills should be encouraged. The development of food enterprises and expansion of food enterprises should be supported.	
106	Planning Policy 8.4	STBA support this strongly		
108	8-F1	ADD OBJECTIVE: Pursue active land management of publicly owned lands to optimise habitat for native species. To optimise species contributing to the chain of local quality food production	The Council can lead best practice by doing this	STBA welcome the many wilding projects that are being managed and STBA would like to encourage the Council to actively utilize its own extensive land holdings to lead in this area.
116		Continue to collaborate with Fáilte Ireland, OPW and other tourism stakeholders in the development and delivery of VEDPs to ensure that Tipperary's established and emerging attractions and activities are continually developed to their maximum potential. Continue to collaborate with Fáilte Ireland, OPW and other tourism stakeholders in the development and delivery of VEDPs to ensure that Tipperary's established and emerging attractions and activities are continually developed to their maximum potential. This will include the designation and protection of specific and important landscapes.	The Council should consider designation of Landscape Conservation Areas to protect specific and important landscapes. This would support the view expressed in the introductory paragraph in Chapter 11 All measures concerned with the protection, management and development of the landscape and scenic locations and their resources must give full and explicit recognition to landscape as <i>home to nature</i> and give effect to actions to protect and enhance the biodiversity therein.	The time has now come for real meaningful policy measures on biodiversity to be included in the CDP. Such measures will go beyond the aspirational intent and will lead out the change in recognising the links between high quality environment high quality landscape and the production of quality foodstuffs.
116	9-3	(remove Encourage) Requiree all new tourism related development proposals to: (a) Maximise energy efficiency through siting, layout, design and incorporate best practice in energy technologies, conservation and smart technology. (b) (remove Support) Demonstrate best-practice environmental management	All measures concerned with the protection, management and development of the landscape and scenic locations and their resources must give full and explicit recognition to landscape as <i>home to nature</i> and give effect to actions to protect and enhance the biodiversity therein.	STBA strongly support the need to develop specific measures to protect the environment, habitats and biodiversity within County Tipperary. The CDP must be a strong instrument in the implementation of the National Biodiversity plan.

		including energy efficiency, waste management, biodiversity and sustainable transport.		
123	10.7	Carbon capture systems include sustainable forestry, native tree planting and better management of hedgerows , peatland and soils, to support carbon sequestration and enhancement of biodiversity	<p>Combining mitigation measures alongside reducing carbon emissions suggests greater positive climate change impact. Hedgerows and forestry and diversity of plant species have a significant role to play in this regard. However, hedgerows need to be managed in such a way as to maximise their carbon sequestration capacity.</p> <p>It is proposed that the ‘quality’ of the hedgerows is therefore important on a number of levels and that greater attention is afforded to this aspect of landscape management.</p>	<p>As significant areas of land on which forestry and hedgerows are located is privately owned (i.e. farms) STBA urge the County Council to work in partnership with farming organisation to foster good practice.</p> <p>The CDP should explicitly contain a commitment to same.</p>
125	10 - J	<p>NEW OBJECTIVE</p> <p>Support, in collaboration with stakeholders such as the farming organisations, Teagasc etc in Tipperary the further development of a culture of sustainability and in addressing climate change and biodiversity through training programmes, support and the development of demonstration sites / activities.</p>	<p>Tipperary County Council could facilitate the promotion and support for improved practices in rural areas by increasing awareness and information sharing between farmers. Promotion of the beneficial initiatives being adopted by individuals and farmer groups would also result in more sustainable farming systems, associated ecosystems services and improved biodiversity for the benefit of residents in and visitors to the county.</p>	<p>It is the view of STBA that County Development Planning policies need to come up to date and relate specifically to these issues. Examples:</p> <ul style="list-style-type: none"> • work in partnership with stakeholders to reward good practice in hedgerow management and consider sponsoring awards / rewards to ‘hedgerow heroes’ who demonstrate outstanding good practice with a focus on <i>quality</i> hedgerows. • eliminate the use of herbicides, pesticides and insecticides, in particular neonicotinoids, which are detrimental to the well-being of pollinators and honeybees on all council managed land and promote the avoidance of same in as far as possible on privately owned land within the County. • support training measures to upskill contractors involved in hedge cutting activities such that they become advisors / advocates for the

				appropriate management of hedgerows on private land.
126	11.1	Add an outcome ...”including a healthy vibrant natural habitat feeding into the chain of quality food production “		STBA would like to see the CDP take on board the concept that Tipperary future in quality food production is only going to be possible if steps are taken to support recreate and otherwise value a high quality natural environment in the county
126	11.1 Para 3	The Council needs to strengthen this para: add protection of hedgerow and natural wildflower areas as well as taking opportunities to pursue policies that will enhance hedgerow biodiversity advantages and rewilding of cultivated areas where feasible and suitable opportunities occur in the course of development construction		As above
127	Point 4	Change to the following: Planning policy will pursue an active policy to conserve and restore biodiversity and ecosystems in the countryside at each and every development opportunity that arises	The Council should lead in this and should use their considerable powers and the many engagements with others engaged in development so as to ensure those involved in development assist and play their part in achieving restoration of biodiversity and ecosystems in the countryside	STBA believe there is a willingness for conserving biodiversity but that knowledge or leadership may not always be there and The CDP can provide this
127	Para 3	Habitat degradation is a reality with development activity. Accordingly counter balance measures need to be assessed in considerations related to the planning approval process. There needs to be section in the planning application process which obligates applicants to assess habitat degradation and to enable developers to propose counter balance habitat enhancement measures	While this is a requirement for areas designated under the habitats directive it is not intended that a similar system be established for all habitats. Nevertheless, development by its nature involves degrading the habitat of the development site What is requested here is that an obligation be placed on the development to counter balance such degradation	Of particular interest to beekeepers in where hedgerows are removed that some counterbalancing hedgerows be replanted elsewhere with proximity and recognition of the connecting ‘corridor’ role that hedgerows provide for many wildlife species.

127	Para 4	<p>See above proposed insertion</p> <p>This para 4 goes some way towards achieving what STBA requires</p> <p>This para should be strengthened by requiring development proposals to identify and quantify what is being removed and by requiring developments to propose counterbalancing measures</p>		
129	summary	<p>Add:</p> <p>It will be a requirement that landscape degradation resulting from development will be assessed and counter measure proposals will be required as part of new development</p>		
133/ 134	11.7	Landscape Character Assessments	<p>Landscape is not just a visual issue. It comprises the constituent natural flora and fauna that inhabit that space. Between Mitchelstown and Cahir, the Galtees and the Knockmealdowns, is a long valley area which is a conservation area (voluntary among beekeepers) for the native Irish blackbee.</p> <p>Is there any place in the CDP where the uniqueness of the Irish native Black Bee can be recognised as an important species and a key component of this more holistic view of landscape?</p>	<p>The native Irish blackbee is a particular species for which Tipperary is renowned. It exists in the landscape and in turn supports the landscape to survive and thrive as given its significant pollination activities. Landscape needs to be understood in this sense and the protection of the flora and fauna of the area be central to this understanding. In this context, STBA wishes to see support for bees included here,</p>

139	11-12	Seek to control the spread of invasive plant and animal species, including recognition of Tipperary as a Voluntary Conservation Area (VCA) for the Native Irish Honeybee (<i>Apis mellifera mellifera</i>) and consideration of potential pathways for invasive species spread, i.e. watercourses.	The support of the County Council in this regard would be consistent with Action 4.4 of the new All Ireland Pollinator Plan, 2021 -2025 which relates to conservation of <i>A. m. mellifera</i> and states “ Ireland has a duty to conserve this genetic resource ” (AIPP 2021-2025 pg. 48).	A key tool in protecting and augmenting populations of threatened species is the designation of conservation areas in which the organism of interest is accorded special protection by improving supports such as habitats and reducing threats such as competitors or diseases. The use of Voluntary Conservation Areas is a key element of the strategy advocated by Native Irish Honey Bee Society (NIHBS) in support of the native Irish honeybee, <i>A. m. mellifera</i> .
140	11-C	Support and facilitate the implementation of the objectives of the Tipperary Heritage Plan 2017- 2021 and, (b) Prepare and implement a ‘Biodiversity and Heritage Plan’ for County Tipperary over the lifetime of the County Development Plan.	The preparation of a biodiversity and heritage plan over the lifetime of the CDP needs to be expedited. It is essential a such a plan is prioritised and implemented as a priority. The preparation and implementation of the plan should be underpinned by the appointment of a Biodiversity Officer (s)	It is essential that such a plan give full recognition to Beekeeping as a key practice of Ireland's Living Cultural Heritage
140	11 - D	(a) Support the objectives of the All Ireland Pollinator Plan (remove 2015-2020) 2021-2025 by (remove encouraging) requiring the planting of pollinator friendly native trees and plants within grass verges along public roads and existing and future greenways, new hedgerows, public parks and public open spaces in towns and villages, including part of mixed use and residential developments. (b) Prepare and implement a ‘Pollinator Action Plan’ for County Tipperary over the lifetime of the Plan	The preparation of a Pollinator Action Plan over the lifetime of the CDP needs to be expedited. It is essential a such a plan is prioritised and implemented as a priority. The preparation and implementation of the plan should be underpinned by the appointment of a Biodiversity Officer (s) It should also be noted that wild meadow type amenity areas are now recognised as having more beneficial value for pollinators and once established have lower maintenance input requirements resulting in a ‘win win’ outcome.	STBA is fully supportive of this action but urges its development and implementation is expedited.