

# Green Infrastructure Jobs

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# Purpose of the work

## Aim:

1. To estimate the number of jobs in Green Infrastructure in the North West currently
2. To project forward potential future job creation from targeted investments

## Purpose:

- To inform bids for funding (e.g. ERDF) and
- General advocacy for the sector (e.g. with LEPs, Central Government departments)

...Builds on work undertaken in 2010.



# Jobs Baseline

1. Establish and define set of economic activities relevant to GI



2. Map these to SIC Codes



3. Estimate the proportion of relevant activity for each SIC code



4. Use publicly available data to estimate number of jobs

## Primary GI Jobs

Rely directly on GI for their operation

e.g.

- All agriculture and forestry
- Landscape service activities

...All activity is relevant to GI



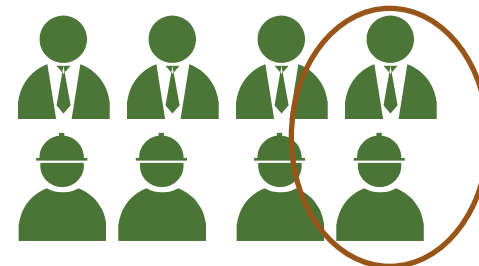
## Secondary GI Jobs

Rely on the products of GI or use GI to provide services

e.g.

- Wood manufacturing
- Sports clubs etc.

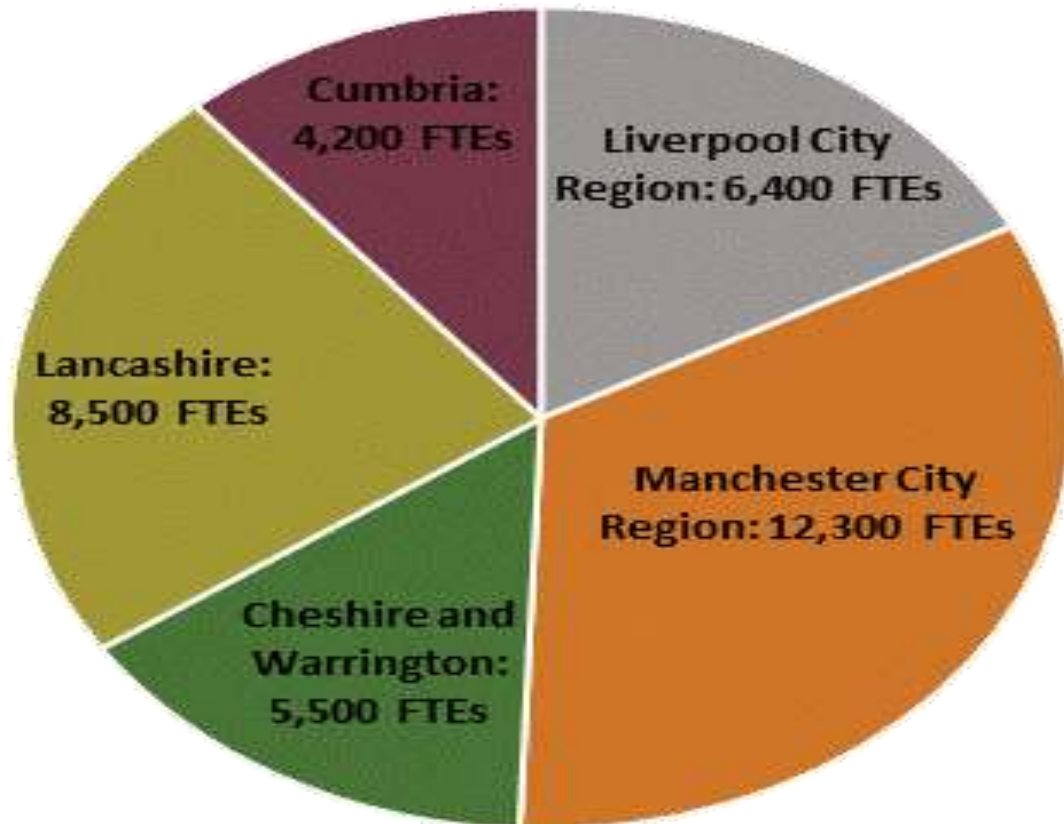
...A proportion of activity is relevant to GI



# SIC Codes and Apportionment

	SIC	Relevant Activities	% relevant to GI	Rationale for Apportionment
<b>Primary GI Jobs</b>				
SIC A	Agriculture, Forestry and Fishing	All	100%	All primary GI jobs: dependent on the land and water.
SIC H	Transport	Water transport (passenger and freight, sea & inland)		All primary GI jobs: dependent on water.
SIC I	Accommodation and Food Service activities	Camping Grounds, recreational vehicle parks and trailer parks		All primary GI jobs: dependent on the land.
SIC N	Admin and Support Services	Landscape service activities		All primary jobs since relate to the land.
<b>Secondary GI Jobs</b>				
SIC C	Manufacturing	Meat, fish, fruit and veg, vegetable oils, dairy products, grain mill, bakery products, animal feeds, wood, cork and straw.	15%	Estimate that 15% of input comes from local sources.
SIC L	Real Estate Activities	Buying/selling/renting of rural real estate, estate agency.	1.3%	Ratio of wages for agency & management of rural property in TMF area to all gross wages in the sector in the area.
SIC R	Arts, entertainment and recreation	Sports facilities and clubs	80%	Estimate from previous work carried forward.

- **46,000** Full Time Equivalent (FTE) jobs in GI activities in the North West (Source: BRES)



**Note:** Chart excludes data on Farm Agriculture, which is not available at a sub-regional level. There are 9,400 FTEs working in Farm Agriculture in the North West.

	Liverpool City Region		Manchester City Region		Cheshire and Warrington		Lancashire		Cumbria	
	No.	% of all GI	No.	% of all GI	No.	% of all GI	No.	% of all GI	No.	% of all GI
Agriculture, Forestry and Fishing	200	3%	400	3%	950	17%	450	5%	600	14%
Manufacturing using products of land	1,100	17%	3,050	25%	950	17%	1,950	23%	900	22%
Water transport	600	9%	100	1%	0	0%	50	1%	250	6%
Camping grounds, rec. vehicle parks	50	1%	0	0%	400	7%	850	10%	800	19%
Rural real estate	100	2%	200	2%	50	1%	100	1%	50	1%
Landscape activities	1,050	16%	1,050	9%	700	13%	1,300	15%	500	12%
Sports facilities and clubs	3,300	52%	7,400	60%	2,400	44%	3,850	45%	1,050	25%
<b>Total</b>	<b>6,400</b>	<b>100%</b>	<b>12,300</b>	<b>100%</b>	<b>5,500</b>	<b>100%</b>	<b>8,550</b>	<b>100%</b>	<b>4,150</b>	<b>100%</b>

Note: Excludes Farm Agriculture



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Note: Excludes Farm Agriculture

- Recognise that this is one of several potential methods that could be used
- Data is based on sample survey (BRES) so subject to sampling error



# Projections

1. Define broad **typology of interventions** in GI activities that could create/ safeguard jobs



2. Estimate **unit costs** for jobs created/safeguarded from these interventions



3. Apply these to a **notional investment programme** to illustrate potential gross outputs

# Typology of Interventions

Investment area	Indicative Activities and types of Jobs involved
Manufacturing using local produce, food, timber	<ul style="list-style-type: none"> <li>• Support for investment, development of export opportunities, apprenticeships and training</li> </ul>
Inclusion programmes	<ul style="list-style-type: none"> <li>• Support for workless individuals to gain skills and employment opportunities in GI activities</li> </ul>
Business support for existing GI businesses	<ul style="list-style-type: none"> <li>• Support for investment, development of export opportunities, apprenticeships and training</li> </ul>
Support for sport and leisure activities	<ul style="list-style-type: none"> <li>• Marketing and product development support</li> </ul>
Support for Tourism/ visitor economy activities	<ul style="list-style-type: none"> <li>• Support for promotion and marketing as well as infrastructure improvements to enable larger numbers of visitors</li> </ul>
Biomass, tree stations, wood allotments etc.	<ul style="list-style-type: none"> <li>• Capital support for machinery, plus support for marketing, training and apprenticeships</li> </ul>
Waterway management	<ul style="list-style-type: none"> <li>• Support for inclusion and volunteering programmes that improve the quality of waterways and also provide skills, training and job opportunities</li> </ul>
Urban, community led food growing programmes	<ul style="list-style-type: none"> <li>• Support for development of community led food growing groups, inc. help with legal costs to enable land tenure and set up of constituted groups that can access other funding streams</li> </ul>
Woodland Management	<ul style="list-style-type: none"> <li>• Capital support for machinery, revenue support for skills, training and job creation</li> </ul>
Urban Tree planting and maintenance	<ul style="list-style-type: none"> <li>• Revenue support to enable apprenticeships and skills development</li> </ul>
Carbon and biodiversity offsetting and Payments for Ecosystem Services	<ul style="list-style-type: none"> <li>• Marketing, promotion and IT</li> </ul>
Landscape improvements along key transport routes	<ul style="list-style-type: none"> <li>• Revenue support to enable apprenticeships and skills development</li> </ul>
New woodland planting	<ul style="list-style-type: none"> <li>• Capital support for machinery, revenue support for skills, training etc.</li> </ul>



- Based on professional judgement – best estimates
- Have been run past NENW Investment Forum

	Cost per Gross Job Created	Cost per Gross Job Safeguarded
Landscape improvements along key transport routes	100	67
Work related to carbon and biodiversity offsetting and Payments for Ecosystem Services	40	200
Urban Trees	75	67
Woodland Management	75	50
Urban, community led food growing programmes	30	300
Waterway management	27	400
New woodland planting	25	80
Tourism and visitor economy jobs linked to GI	20	125
Manufacturing using local produce, food, timber	20	67
Support for existing businesses in the GI sector	17	100
Biomass, tree stations, wood allotments, wood energy, supply chain etc.	17	67
Increase In jobs related to sport and leisure	17	50
Inclusion programmes	8	800

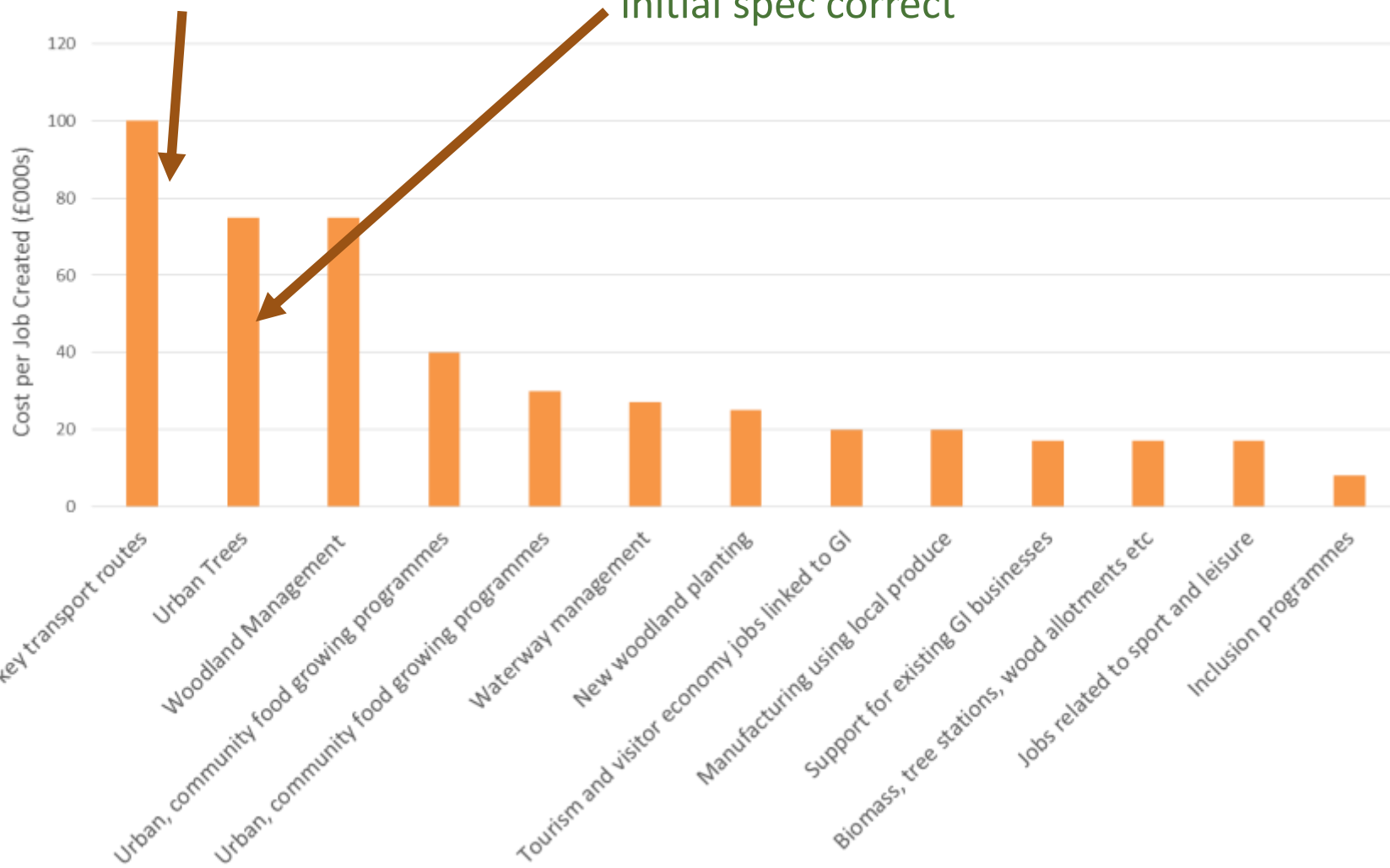
# Cost per Job Created (£000s)

High capital costs

Need for experienced operators

High unit costs of large trees

Low ongoing maintenance if initial spec correct



## For comparison...

- From 2007-13 ERDF Programme in England

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### Public Sector cost per Gross Job Created and Safeguarded (£000s)

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	Mean	<b>Median</b>	Lower Quartile
Gross Job Created	70.5	<b>25.7</b>	11.5
Gross Job Safeguarded	58.1	<b>16.9</b>	7.6

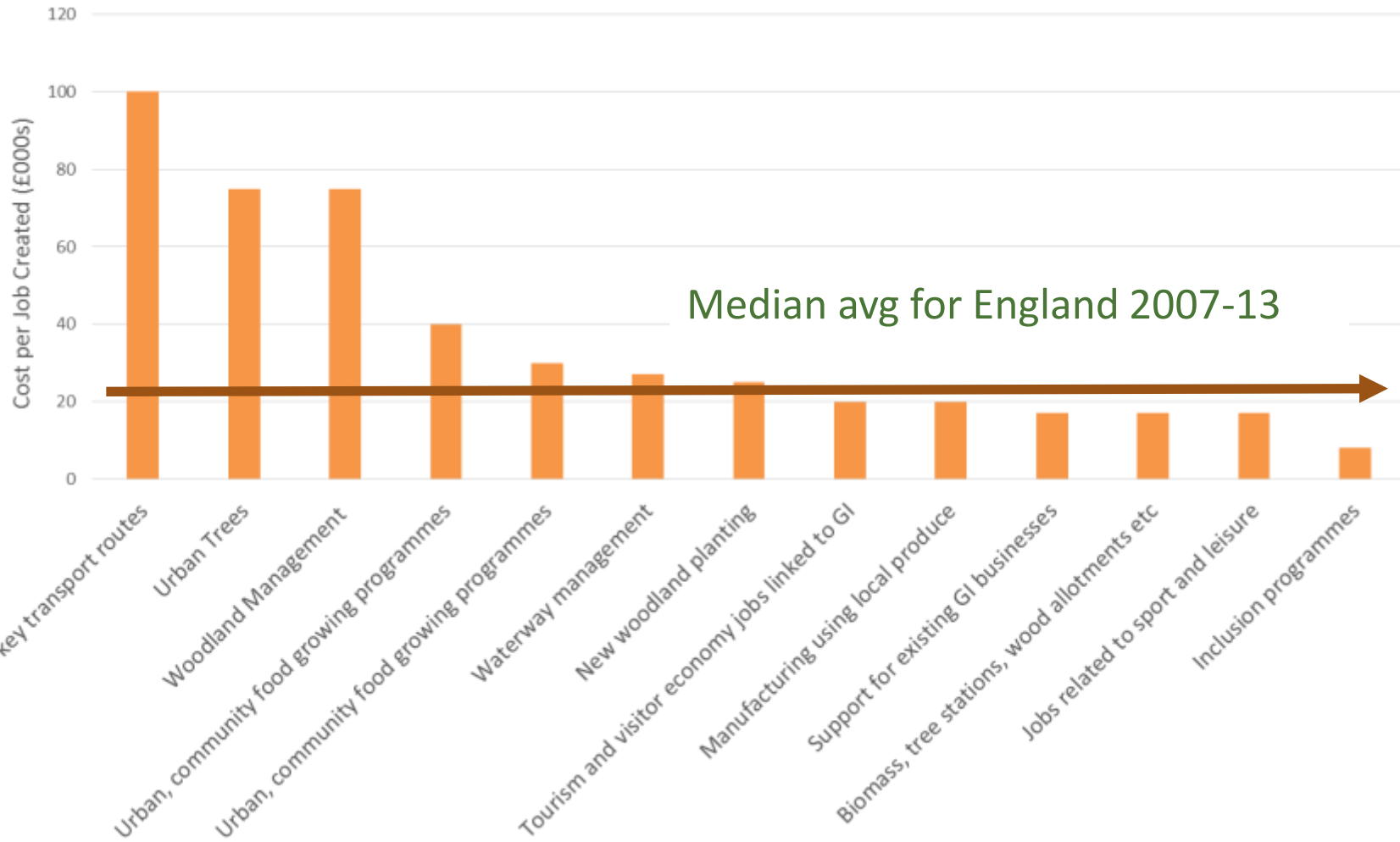
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Source: MCIS data provided by DCLG February 2012

Note: Jobs created based on 758 observations; Jobs safeguarded based on 413 observations.

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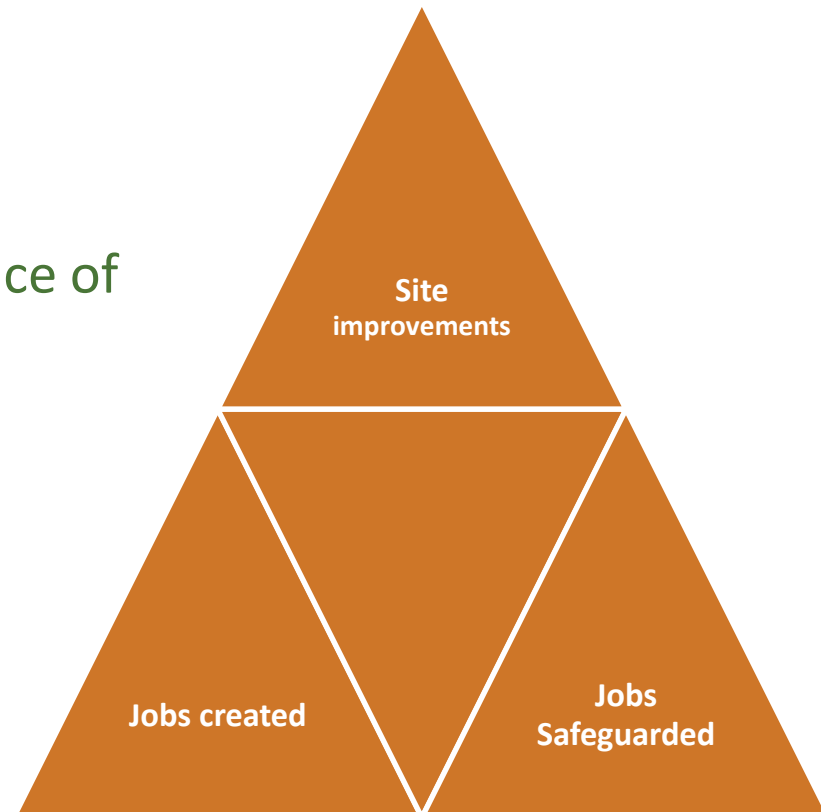
# Cost per Job Created (£000s)



# Investment Programme

## A notional £36m programme of:

- GI improvements, poss targeting “pinch points” impacting on area’s ability to attract investment / dampening local economic potential
- environmental programmes, which create jobs.
- ...a triangle of outputs achieved
- policy considerations may shift the balance of interventions.



# Investment Programme

Investment area	Public Sector Investment (£m)	Gross Jobs created	Gross Jobs safeguarded	Cost per job created and safeguarded (£000s)
Landscape improvements along key transport routes	1	10	15	40
Carbon and biodiversity offsetting and Payments for Ecosystem Services	2	50	10	33
Urban Trees	3	40	45	35
Woodland Management	3	40	60	30
Urban, community led food growing programmes	4	100	10	27
Waterway management	4	150	10	25
New woodland planting	2	80	25	19
Tourism and visitor economy jobs linked to GI	5	250	40	17
Manufacturing using local produce, food, timber,	1	50	15	15
Support for existing businesses in the GI sector	1	60	10	14
Biomass, tree stations, wood allotments, wood energy, supply chain etc.	1	60	15	13
Increase In jobs related to sport and leisure	2	120	40	13
Inclusion programmes	8	1,000	10	8
<b>Total</b>	<b>36</b>	<b>2,000</b>	<b>300</b>	<b>15</b>